UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Attachment to Advisory Action

9.   Claims 5, 9-10, and 13-15 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bonsma et al ("A distributed implementation of the SWAN peer-to-

peer look-up system using mobile agents", 2002), in view of Triantafillou et al ("Towards

high performance peer-to-peer content and resource sharing systems", 2003), Kwon et

al ("An efficient peer-to-peer file sharing exploiting hierarchy and asymmetry", 2003),

and Adar et al ("Free Riding on Gnutella", 2000), and in further view of Christenson et al

(US 2002/0112008).

Regarding claim 13, the Bonsma/Triantafillou/Kwon/Adar system teaches comprising:

a plurality of computer nodes, wherein each computer stores data items, each

data item being assigned to one of a plurality of virtual directories, some of said

directories being assigned, as subdirectories (Triantafillou: sections 3.2-3.3 provide for

multiple categories);

first retrieval means responsive to input of a directory name to identify a

computing node having items in at least one subdirectory assigned to that (Triantafillou:

sections 3.2-3.3 provide for node lookup based on multiple category matching);

second retrieval means connected to receive an address identified by the first

retrieval means and operable in response thereto to identify further computing nodes

having items in one subdirectory assigned to the same directory (Triantafillou: sections

3.2-3.3 provide for cluster to node IDing based on multiple category lookups);

wherein each computing node having items in at least one subdirectory assigned

to a given directory has associated with it a data storage area for containing addresses

for other computing nodes having items in the at least on subdirectory assigned to the

same directory and is responsive to enquiry messages to return a message containing

the addresses of the list (Triantafillou: sections 3.2-3.3 provide for cluster to node ID

mapping for multiple categories; Adar: query message for returning addresses);

and wherein the second retrieval means is operable to send an enquiry message

to the node identified by the first retrieval means and upon receipt of a response to

iteratively send enquiry messages to addresses contained in the response to that

enquiry message or as the case may be in a response to a subsequent enquiry

message, thereby identifying a plurality of computing nodes having items in

subdirectories of the directory in question (Triantafillou: sections 3.2-3.3 provide for

mapping categories to nodes for multiple categories; See Adar for querying to get

locations and requesting items).

The Bonsma/Triantafillou/Kwon/Adar system does not teach wherein

subdirectories (other semantic categories) may be assigned to directories (a first

semantic category).

Christenson, in a similar field of endeavor, teaches wherein subdirectories may

be assigned to directories (Christenson: [0314]-[0316]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to utilize the teachings of Christenson for having subdirectories.

The teachings of Christenson, when implemented in the

Bonsma/Triantafillou/Kwon/Adar system, will allow one of ordinary skill in the art to manage a directory-based DHT with subdirectories. One of ordinary skill in the art would be motivated to utilize the teachings of Christenson in the Bonsma/Triantafillou/Kwon/Adar system in order to implement a commonly-used subdirectory concept to the system.

Regarding claim 5, the Bonsma/Triantafillou/Kwon/Adar/Christenson system teaches wherein some of the said directories are assigned, as subdirectories (other semantic categories), and wherein each computer having retrieval means also includes:

a first subdirectory retrieval means responsive to input of a directory name to identify a computer node having items in at least one subdirectory assigned to that directory (Triantafillou: section 3.3, requesting node steps a-b, target node steps a-b);

a second subdirectory retrieval means connected to receive an address identified by the first subdirectory retrieval means and operable in response thereto to identify further computing nodes having items in at least one subdirectory assigned to the same directory (Triantafillou: section 3.2-3.3); and

wherein subdirectories may be assigned to directories (Christenson: [0314]-[0316]).

Regarding claim 9, this computer claim contains limitations corresponding to those found within claim 5 and the same rationale of rejection is used, where applicable.

Regarding claim 10, the Bonsma/Triantafillou/Kwon/Adar/Christenson system teaches wherein the retrieval means is operable to compile a composite list of said subdirectories (Triantafillou: section 3.2-3.3 provides for generating list of all categories).

Regarding claim 14, the Bonsma/Triantafillou/Kwon/Adar/Christenson system teaches wherein the retrieval means is operable to compile a composite list of said subdirectories (Triantafillou: section 3.2 for generating list of all categories).

Regarding claim 15, this claim contains limitations found within that of claim 13 and the same rationale of rejection is used, where applicable.